



Solar Powered Auto Darkening Welding Helmet

Instruction Manual



Need help?

Call our customer service hotline at 1-800-386-0191

For up-to-date product information, accessories and for Spanish or French versions of this manual, please visit our website at: www.titan-us.com and click on the literature link or scan the QR Code at left with your smart phone.

SAVE THESE INSTRUCTIONS

READ BEFORE USING

It is the owner and/or operator's responsibility to study all WARNINGS, operating, and maintenance instructions contained on the product label and instruction manual prior to use of this product. The owner/operator shall retain product instructions for future reference.

The owner and/or operator are responsible for maintenance, maintaining all decals or warning labels and while in use, maintaining the unit in good working order. If the owner and/or operator are not fluent in English, the product warnings and instructions shall be read and discussed with the operator's native language by the purchaser/owner or his designee. Make sure that the operator comprehends its contents. Safety information shall be emphasized and understood prior to usage. The welding helmet shall be inspected per the operating instructions.

Users of this welding helmet must fully understand these instructions. Each person using this product must also be of sound mind and body and must not be under the influence of any substance that might impair their vision, dexterity, or judgment.

Protect yourself and others by observing all safety information.

Failure to comply with instructions could result in personal injury and/or property damage!

If you encounter any problems or difficulties, please contact our customer service department at:

1-800-386-0191

NOTICE

This manual is intended for your benefit. Please read and follow the safety, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice.

SAFETY ALERT

WARNING

Read and understand this entire instruction manual before attempting to assemble, install, operate or maintain this tool. Failure to comply with the instructions may result in serious personal injury and/or property damage!

The following signal words are used to emphasize safety warnings that must be followed when using this tool:

DANGER

Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.

WARNING

Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury.

NOTICE

Indicates important information, which if not followed, MAY cause damage to equipment.

UNPACKING & INSPECTION

After opening the carton, unpack your new tool and related parts & accessories. Please inspect it carefully for any damage that may have occurred during transit. Please check it against the photograph on carton. If any parts are missing, please call customer service at: **1-800-386-0191**.

Package contents:

- 1 Helmet
- 1 Instruction Manual
- 1 Replacement Shield
- * Batteries Included

WARNING

Do not operate this tool if damaged during shipment, handling or misuse. Do not operate the tool until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage.

All damaged parts must be repaired or replaced as needed prior to operating this tool.

Check to see that all nuts, bolts and fittings are secure before putting this tool into service. If you have any questions, or require assistance with damaged or missing parts, please contact our factory customer service department at **1-800-386-0191**

Please have the model number and date of purchase available for reference when calling.

MODEL NUMBER: _____

DATE of PURCHASE: _____

GENERAL INFORMATION

This helmet incorporates recent advances in science and technology including optoelectronics detection, solar power, and microelectronics making it one of the most advanced welding helmets available. Under normal welding conditions, it will protect the welder's eyes and face from harmful sparks and radiation. It frees both hands while striking an arc, darkening the lens automatically when an arc is struck and then immediately going back to a light state when welding is done. With the time-delay adjustment feature, the operator can adjust the time for filter to return from a dark state to normal state. With variable shades ranging from DIN 9 to DIN 13, the amount of darkening can be adjusted accordingly to the job. The auto darkening lens filters are designed for arc welding and cutting applications and are suitable for most arc welding processes including Carbon Arc, Plasma Arc, MIG, TIG, MAG, and SMAW. Fail safe operation - in the event of electronic failure, the lens shade remains dark at Shade 13, protecting the welder against harmful ultraviolet (UV) and infrared (IR) radiation.

SAFETY RULES FOR WELDERS

⚠ WARNING

ARC Welding can be hazardous. Protect yourself and others from possible serious injury or death. Keep children away.

Pacemaker wearers should consult with their doctor before operating.

Read and understand all instructions. Failure to follow all instructions included with this product could result in serious personal injury and/or property damage.

For additional safety information, it is strongly recommended that you consult the following safety publications:

Safety in Welding, Cutting, and Allied Processes, ANSI Standard Z49.1, from American Welding Society, 550 N.W. LeJeune Rd, Miami FL 33126 (phone: 305-443-9353 or 800-443-9353, website: <http://www.aws.org>)

Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping, American Welding Society Standard AWS F4.1, from American Welding Society, 550 N.W. LeJeune Rd, Miami, FL 33126 (phone: 305-443-9353 or 800-443-9353, website: <http://www.aws.org>).

National Electrical Code, NFPA Standard 70, from National Fire Protection Association, P.O. Box 9101, 1 Battery March Park, Quincy, MA 02269-9101 (phone: 617-770-3000, website: www.nfpa.org and www.sparky.org).

Practice For Occupational And Educational Eye And Face Protection, ANSI Standard Z87.1, from American National Standards Institute, 11 West 42nd Street, New York, NY 10036-8002 (phone: 212-642-4900, website: <http://www.ansi.org>).

Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, NFPA Standard 51B, from National Fire Protection Association, P.O. Box 9101, 1 Battery March Park, Quincy, MA 02269-9101 (phone: 617-770-3000, website: www.nfpa.org and www.sparky.org).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910, Subpart Q, and Part 1926, Subpart J, from U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250 (there are 10 Regional Offices--phone for Region 5, Chicago, is 312-353-2220, website: <http://www.osha.gov>).

Follow all local electrical and safety codes as well as in the United States, the National Electrical Codes (NEC) and the Occupational Safety and Health Act (OSHA).

All installation operation, maintenance and repair procedures must be performed only by qualified individuals.

⚠ WARNING



The following hazards can occur during the normal use of this product:

ELECTRIC SHOCK CAN KILL!

Reduce the risk of death or serious injury from shock. Read, understand and follow ALL safety instructions. Be sure that everyone who uses this welding equipment or who is a bystander in the welding area understands and follows ALL safety instructions as well.

- Do not touch live electrical parts. The electrode and work piece clamp are electrically "hot" when the welder is on.
- Wear dry, hole-free insulating gloves and body protection.
- Insulate yourself from work and ground using dry insulating mats or covers big enough to prevent physical contact with the work piece or ground.
- Do not use in damp areas, if movement is confined, or if there is a danger of falling.
- Disconnect input power before installing or servicing this equipment.
- Properly install and ground this equipment according to its Owner's manual and national, state, and local codes.
- Always verify the supply ground – check and be sure that input power cord ground wire is properly connected to ground terminal in disconnect box or that cord plug is connected to a properly grounded receptacle outlet.
- Frequently inspect input power cord for damage or bare wiring – replace cord immediately if damaged – bare wiring can kill. Do not use worn, damaged, undersized, or poorly spliced cables.
- Turn off all equipment when not in use.
- Do not drape cables over your body.
- If earth grounding of the workpiece is required, ground it directly with a separate cable.
- Do not allow any part of the body to touch the electrode if you are in contact with the ground or grounded work piece.
- Use only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to manual.
- Always keep all panels and covers securely in place when operating the welder.
- Clamp work cable with good metal-to-metal contact to workpiece or worktable as near the weld as practical.
- Insulate work clamp when not connected to workpiece to prevent contact with any metal object.

SAFETY RULES FOR WELDERS (CONTINUED)



FUMES AND GASES can be hazardous!

Welding produces fumes and gases that are hazardous to your health.

- Keep your head out of the fumes. Do not breathe the fumes.
- If inside, ventilate the area and/or use exhaust at the arc to remove welding fumes and gases.
- If ventilation is poor, use an approved air-supplied respirator.
- Read the Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.
- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watchperson nearby. Welding fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- Do not weld in locations near degreasing cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and if necessary, while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.



ARC RAYS can burn eyes!

Never look at arc welding without proper eye protection. Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Hot sparks fly off from the weld and can burn eyes and skin.

Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards).

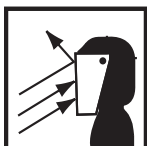
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash and glare; warn others in the area not to watch the arc.
- Wear protective clothing made from durable, flame resistant materials, leather welding gloves and full foot protection.



WELDING can cause fire or explosion!

Welding on closed containers, such as tanks, drums, or pipes, can cause them to explode. Sparks can fly off from the welding arc. The flying sparks, hot workpiece, and hot equipment can cause fires and burns. Accidental contact of electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any welding.

- Always keep a fire extinguisher readily available and watch for fire.
- Protect yourself and others from flying sparks and hot metal.
- Do not weld where flying sparks can strike flammable material.
- Remove all flammable materials from the welding area. If this is not possible, tightly cover them with approved covers.
- Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas.
- Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
- Do not weld on closed containers such as tanks, drums, or pipes; unless they are properly prepared according to AWS F4.1 standards
- Connect work cable to the work as close to the welding area as practical to prevent welding current from traveling long, possibly unknown paths and causing electric shock and fire hazards.
- Never use arc welder to thaw frozen pipes.
- Remove electrode from holder when not in use.
- Wear oil-free protective garments such as leather gloves, heavy shirt, cuff-less trousers, high shoes, and a cap.
- Remove any combustibles, such as butane lighters or matches, from your person before doing any welding.



FLYING METAL can injure eyes!

- Welding, chipping, wire brushing, and grinding cause sparks and flying metal. As welds cool, they can throw off slag.
- Wear ANSI approved safety glasses with side shields under your welding helmet.

SAFETY RULES FOR WELDERS (CONTINUED)



HOT PARTS can cause severe burns!

- Never touch hot parts bare handed.
- Allow adequate cooling period before touching work piece.



MAGNETIC FIELDS can affect pacemakers!

Electromagnetic fields (EMF) are generated around electric welding cables and welding machines. These EMF's can interfere with some pacemakers. Pacemaker wearers should consult their doctor before going near arc welding, gouging, or spot welding operations. To reduce magnetic fields in the workplace, use the following procedures:

- Keep cables close together by twisting or taping them.
- Arrange electrode and work piece cables to one side and away from the operator.
- Do not coil or drape cables around your body.
- Keep welding power source and cables as far away from operator as practical.
- Connect work clamp to workpiece as close to the weld as possible.



NOISE can damage hearing!

Noise from some processes or equipment can damage hearing.

- Wear approved ear protection if noise level is high.



FIRE OR EXPLOSION hazard.

- Do not install or place unit on, over, or near combustible surfaces.
- Do not install unit near flammables.
- Do not overload building wiring - be sure power supply system is properly sized, rated, and protected to handle this unit.



OVERUSE can cause OVERHEATING

- Allow cooling period; follow rated duty cycle.
- Reduce current or reduce duty cycle before starting to weld again.
- Do not block or filter airflow to unit.



WELDING WIRE can cause injury.

- Do not point gun toward any part of the body, other people, or any metal when threading welding wire.
- Do not press gun trigger unnecessarily. When feeding welding wire through the gun, the gun is electrically "live" and can cause electric shock.



California Proposition 65 Warnings

- Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Wash hands after handling.

- This product contains chemicals, including lead, known to the State of California to cause cancer, birth defects, and reproductive harm. Wash hands after handling.

WELDING HELMET SAFETY INFORMATION

⚠ WARNING

This helmet is not designed to protect against impact hazards such as fractured grinding wheels, cutting discs, explosive devices or corrosive agents. Machine guards and eye splash protectors must be used when these hazards are present.

- Failure to read, understand and follow these safety precautions and operating instructions could result in severe personal injury, property damage or death.
- Do not open or tamper with the lens filter cartridge.
- Keep out of reach of children.
- This helmet is not suitable for overhead welding positions, laser welding or laser cutting applications.
- Care must be taken to avoid work positions that expose unprotected areas of the body to harmful sparks or radiation, either direct or reflected.
- Impact resistant eye protection that meets current ANSI specifications must be worn at all times when using this helmet.
- Both inner and outer cover lenses must be in place at all times when using this helmet.
- Never use the welding helmet at temperatures outside its operational range 23° to 131°F (-5° to + 55°C).

HELMET SPECIFICATIONS

ANSI standard #:	ANSI Z 87.1-2010
Viewing Area**:	**Model 41254/41260 Only: 3.85" x 1.70" (98mm x 43mm)
Viewing Area:	3.86" x 2.17" (98 x 55mm)
Cartridge dimensions:	4.33" x 3.54" x 0.35" (110mm x 90mm x 9mm)
UV/IR protection:	Up to Shade DIN #16 at all times
Sensitivity:	Level of outside sensitivity adjustable from low to high
Operation temperature:	23° to 131°F (-5° to + 55°C)
Storage temperature:	-4° to 158°F (-20° to + 70°C)
Light shade:	DIN #4
Dark shade:	DIN # 9 - 13 Variable
Power supply:	Solar cells with 2 built-in 3V lithium back-up batteries
Power on/off:	Fully Automatic
Switching time:	Light to Dark: 1/30,000 sec. (-5° C – 0.0008 sec.)
Dark to Light:	0.25 ~ 0.8 sec. (short - middle - long)
Total weight:	450g / 0.99 lb

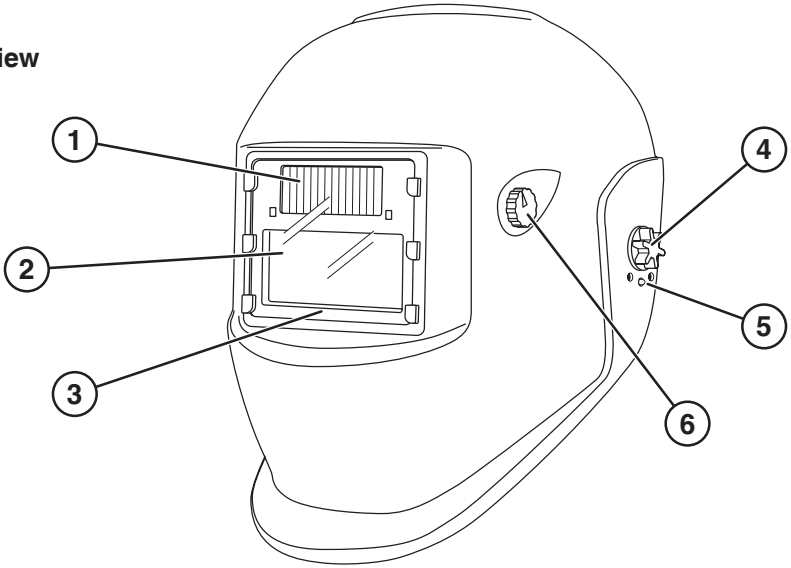
PREPARATION FOR USE

1. Inspect all parts for signs of damage. Any damaged parts should be replaced prior to use.
2. Make sure front Protection Plates, Outer (3) and Inner (9) are securely in place.
3. Remove protective film from Protection Plates.
4. Be sure Lens Filter (2) is clean and free of foreign matter.
5. Use Headband Crown Adjustment (11) and Longitudinal Adjustment (12) to obtain secure fit.
6. Adjust face-to-helmet angle using Angle Adjustment Stud (5). An angle between 10° and 12° is recommended.
7. Select the proper darkening shade for your welding application using the Shade Adjustment Knob (6).
8. Set the Darkening Speed Selector Switch to "Slow" or "Fast" depending on your welding application.

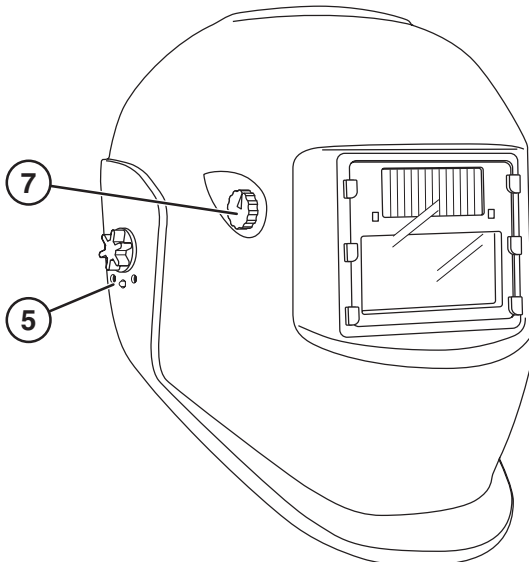
WELDING HELMET PARTS AND COMPONENTS

1. Solar cell power supply
2. Auto Darkening Lens Filter
3. Outer Protection Plate, Repl. part # 41264 (for Model #41254/41260, part# 41261)
4. Headband nut
5. Angle adjustment stud
6. DIN Shade adjustment knob
7. Outside sensitivity adjustment knob

Front Left View



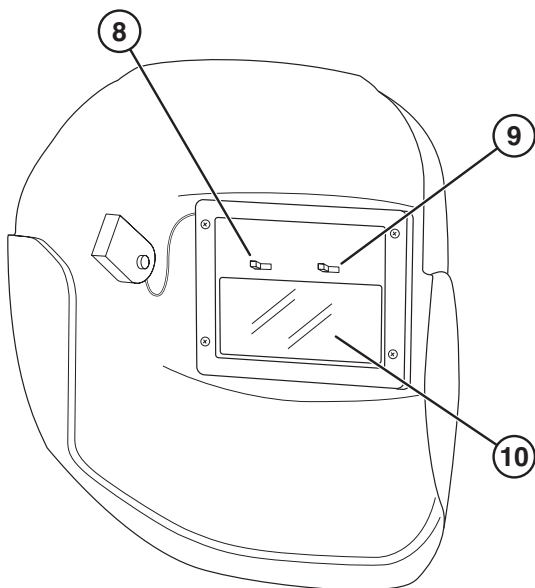
Front Right View



WELDING HELMET PARTS AND COMPONENTS

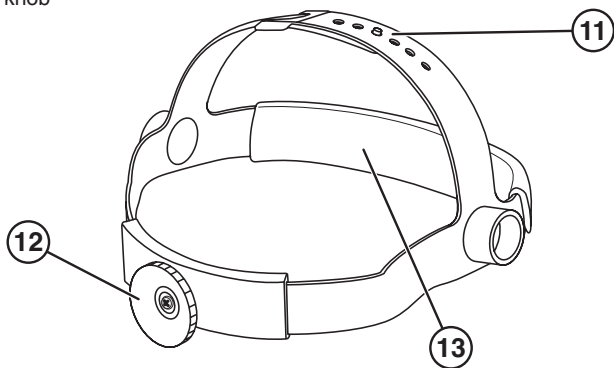
Rear View (head band omitted for clarity)

- 8. Welding/Grinding function switch
- 9. Dark-to-clear time delay switch
- 10. Inner Protection Plate - Repl. part # 41264
(Model #41254/41260, Repl. part# 41261)



Head band (Replacement Part# 41263)

- 11. Headband crown adjustment band
- 12. Headband longitudinal adjustment knob
- 13. Sweatband



CARE AND MAINTENANCE

1. Regularly inspect the helmet and lens filter. Scratches or foreign matter on the lens protective plates can impair vision and should be cleaned or replaced as necessary before using.
Replacement lens protective plates are available - Part number 41264
2. The lens filter may be cleaned with a soft, dry lint free cloth or tissue.
NOTE: DO NOT TOUCH LENS FILTER WITH YOUR HANDS
3. Never place the helmet on or near hot surfaces. Do not store helmet in moist or humid environments.
4. The helmet shell may be cleaned with a soft cloth moistened with mild soap and lukewarm water.
NEVER IMMERSE IN WATER!
5. Occasionally remove the Sweatband (13) and allow to air out and dry.

TROUBLESHOOTING

Your welding helmet was constructed with the best quality materials and workmanship. With proper care, it should give years of trouble-free use. However, from time to time, some adjustments may be necessary to ensure peak performance. Use the chart below to locate possible problems and find their solutions. If you do not see your problem listed below and still require assistance, please call our customer service line at **1-800-386-0191**.

Symptom	Cause	Solution
Uneven Darkening	Headband out of adjustment causing one eye to be closer to lens than other eye	Make sure sweatband is wrapped evenly around headband Make sure headband assembly is properly aligned to helmet shell
Filter flickers or does not darken	Front protection plate is dirty	Clean or replace
	Light sensors are soiled or dirty	Clean with soft, lint free cloth
Poor vision through lens filter	Protection plates or lens dirty	Clean or replace protection plates Wipe lens with soft, lint free cloth
	Lighting conditions are too low	Use welding helmet only with adequate lighting
	Shade number not matched to current welding application	Check application chart and readjust Shade Adjustment Knob

OTHER WELDING HELMETS AVAILABLE



For information on our collection of welding helmets and accessories, please visit our website at: www.titan-us.com or scan the QR code at left with your smart phone.

ONE YEAR LIMITED WARRANTY

Star Asia-USA, LLC (hereinafter "seller") warrants to the original purchaser only, that this product will be free from defects in material or workmanship for a period of one year from date of purchase.

Warranty Performance

Warranty coverage is conditioned upon purchaser furnishing seller or its authorized service center with adequate written proof of the original purchase date. Products returned, freight prepaid and insured, to our factory or to an Authorized Service Center will be inspected and repaired or replaced, at seller's option, free of charge if found to be defective and subject to warranty. Defective parts not subject to normal wear and tear will be repaired or replaced, at our option during the above stated warranty periods. In any event, reimbursement is limited to the purchase price paid. Other than the postage and insurance requirement, no charge will be made for repairs or replacements covered by this warranty. Under no circumstances shall the manufacturer bear any responsibility for loss of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages. There are no warranties which extend beyond the description of the face hereof.

Exclusions

This warranty does not cover parts damaged due to normal wear, abnormal conditions, misapplication, misuse, abuse, accidents, operation at other than recommended pressures or temperatures, improper storage or freight damage. Parts damaged or worn by operation in dusty environments are not warranted. Failure to follow recommended operating and maintenance procedures also voids warranty.

Additional items not covered under this warranty: product failure caused by rain, excessive humidity, corrosive environments or other contaminants; cosmetic defects that do not interfere with product's functionality.

This warranty shall not apply when: the product has been used for commercial or rental purposes; defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; this damage is due to abuse, improper maintenance, neglect or accident; or the damage is due to use of the product after partial failure or use with improper accessories.

Seller will not be liable for: labor charges, loss or damage resulting from improper operation, maintenance or repairs made by persons other than a Star Asia-USA, LLC Authorized Service Center.

The use of other than genuine Star Asia-USA, LLC Repair Parts will void warranty.

Warranty Disclaimers

NO WARRANTY, ORAL OR WRITTEN, OTHER THAN THE ABOVE WARRANTY IS MADE WITH REGARD TO THIS PRODUCT, ANY IMPLIED WARRANTIES OF SELLER REGARDING THIS PRODUCT INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED. BUYER'S OR USER'S REMEDIES ARE SOLELY AND EXCLUSIVELY AS STATED ABOVE. STAR ASIA-USA, LLC SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR SPECIAL DAMAGES. IN NO EVENT, WHETHER AS A RESULT OF A BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, SHALL SELLER'S LIABILITY EXCEED THE PRICE OF THE PRODUCT WHICH HAS GIVEN RISE TO THE CLAIM OR LIABILITY. ANY LIABILITY CONNECTED WITH THE USE OF THIS PRODUCT SHALL TERMINATE UPON THE EXPIRATION OF THE WARRANTY PERIODS SPECIFIED ABOVE.

Limitations on Warranty Disclaimers

Any implied warranties shall be limited in duration to one year from the date of purchase. In some states of the U.S.A. and in some provinces of Canada there is no limitation for how long an implied warranty is valid, so the aforementioned limitation may not apply to you.

In no event shall seller be liable for any incidental or consequential damages (including but not limited to liability for loss of profits) arising from the sale or use of this product. In some states of the U.S.A. and in some provinces of Canada the exclusion or limitation of incidental or consequential damages is not allowed, so the aforementioned limitation or exclusion may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state in the U.S.A., Canada and the Commonwealth of Puerto Rico. For warranty coverage within other countries, contact your local Star Asia-USA, LLC dealer or importer.

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